

## AMENDMENTS

### **Listing of Claims**

The following listing of claims replaces all previous listings or versions thereof:

1. (Withdrawn) Method for the detection and determination of GnRH receptors on tumor cells originating in brain and/or nervous system and/or the meninges and/or Kaposi sarcoma comprising contacting said cells with a ligand for a GnRH receptor and determining if binding has occurred.
2. (Withdrawn) Method according to claim 1 characterized in that said ligand is an antibody.
3. (Withdrawn) Method according to claim 1 or 2 characterized in that said ligand is labeled.
4. (Withdrawn) Method according to claim 1 characterized in that the bound ligand is determined with labeled anti-ligand, preferably an antibody.
5. (Withdrawn) Method for the detection and determination of GnRH receptors on degenerate cells of a tumor originating in brain and/or nervous system and/or the meninges comprising:
  - a) homogenizing peroperatively collected tumor tissue;
  - b) separating the membrane fraction;
  - c) determining the protein concentration in the membrane fraction of b); and
  - d) determining the concentration of GnRH receptors in the membrane fraction of b)to diagnose the above tumors.

6) (Withdrawn) Method according to claim 1 wherein the tissue is derived from a Glioblastoma multiforme, medulloblastoma, pinealoma, neuroblastoma, craniopharyngeoma, meningeoma, chordoma, Ewing sarcoma, malignant melanoma, or Kaposi sarcoma.

7) (Withdrawn) Diagnostic kit for the practice of the method according to claims 1 to 6 comprising a ligand for a GnRH receptor.

8) (Withdrawn) Diagnostic kit according to claim 7 for the detection of GnRH receptors for immunohistological diagnostics, for monitoring of the therapy, aftercare, early recognition of recidivation, and early recognition of tumors originating in brain and/or nervous system and/or the meninges comprising either a GnRH agonist or a monoclonal or polyclonal antibody against GnRH receptors, or one or more specific primer for GnRH receptors, e.g. for the amplification of GnRH receptor DNA in a reverse transcriptase polymerase chain reaction (RT-PCR).

9. (Withdrawn) Diagnostic kit according to claim 3 comprising the use of the method according to claims 7 or 8.

10. (Canceled)

11. (Canceled)

12. (Withdrawn) Conjugate of a GnRH agonist or GnRH antagonist to melatonin or to a melatonin analogue.

13. (Canceled)

14. (Currently amended) A method for decreasing cellular replication ~~[[of]]~~in a GnRH-receptor positive tumor in a subject selected from the group consisting of a tumor originating in one or more of the brain, the nervous system, or meninges of the brain; Ewing sarcoma; Kaposi sarcoma; and malignant melanoma, said method comprising administering to

[[a]]said subject a replication decreasing amount of one or more of a GnRH agonist or GnRH antagonist, said GnRH agonist or antagonist being a GnRH analogue, so as to decrease cellular replication [[of]]in the GnRH-receptor positive tumor.

15. (Previously presented) The method of claim 14 wherein the GnRH-receptor positive tumor is Kaposi sarcoma

16. (Previously presented) The method of claim 14 wherein the GnRH-receptor positive tumor is Glioblastoma multiforme, medulloblastoma, pinealoma, neuroblastoma, craniopharyngeoma, meningioma, chordoma, Ewing sarcoma, malignant melanoma, or Kaposi sarcoma.

17. (Previously presented) The method according to claim 14, wherein the GnRH agonists or GnRH antagonists are used in combination with a cytotoxic substance.

18. (Previously presented) The method of claim 14 wherein the GnRH-receptor positive tumor is malignant melanoma.

19. (Currently Amended) A method for decreasing cellular replication [[of]]in a GnRH-receptor positive tumor in a subject selected from the group consisting of a tumor originating in one or more of the brain, the nervous system, or meninges of the brain; Ewing sarcoma; Kaposi sarcoma; and malignant melanoma, said method comprising administering to [[a]]said subject a replication decreasing amount of a GnRH agonist or GnRH antagonist coupled to a cytotoxic substance, said GnRH agonist or GnRH antagonist being a GnRH analogue, so as to decrease cellular replication [[of]]in the GnRH-receptor positive tumor.

20. (Previously presented) The method of claim 19 wherein the GnRH-receptor positive tumor is malignant melanoma.